

What is claimed is:

1. A porous metal structure body formed by molding a mixed powder containing a metallic powder into a prescribed shape followed by sintering, which comprises the prescribed shape having a single cavity or dispersed plural cavities in a inner portion with a maximum thickness of 6 mm or less at a surface portion side thereof, and a portion other than the cavities having a porosity of 20 to 50% by volume.
2. The porous metal structure body according to Claim 1, wherein the metallic powder sintered body having a porosity of more than 50% by volume is formed in the cavity by being monolithically integrated with the porous metal structure body.
3. A light metal alloy member comprising the porous metal structure according to Claim 1 or 2 enveloped in the light metal alloy by casting.
4. A method for manufacturing a porous metal structure body, comprising filling a mixed powder containing a metallic powder into a mold to shape a prescribed shape, wherein the prescribed shape has a single cavity or dispersed plural cavities in a inner portion with a maximum thickness of 6 mm or less at a surface portion side thereof, and being molded and sintered so that the portion other than the cavities has a porosity of 20 to 50% by volume.
5. The method for manufacturing the porous metal structure body according to Claim 4, wherein the mixed powder containing the metallic powder is filled in the cavities after molding and before sintering, and optionally further compressed at a low pressure after filling with the mixed powder, so that the cavities are filled with the metallic powder sintered body having a porosity of more than 50% by volume after sintering.

6. The method for manufacturing the porous metal structure body according to Claim 4, wherein the metallic powder molded body or the metallic powder sintered body having a shape capable of fitting the cavity is inserted into the cavity after molding and before sintering, so that the cavities are filled with the metallic powder sintered body having a porosity of more than 50% by volume after sintering.